1. Paris and Kim are playing together on a see-saw. Paris has a mass of 30 kg and is 1.2 m from the pivot. If Kim has a mass of 20 kg, how far from the pivot is she?

   A) 0.8 m  
   B) 1.2 m  
   C) 1.8 m  
   D) none of the above

2. At a rate of 3.0 rad/s², a bicycle wheel takes 5.0 seconds to slow to a stop. What was its initial angular velocity?

   A) 0.60 rad/s  
   B) 7.5 rad/s  
   C) 15 rad/s  
   D) 94 rad/s

Some useful equations:

\[ \theta = \left(\frac{1}{2}\right) \alpha t^2 + \omega_0 t + \theta_0 \]

\[ \omega = 2 \pi f \]

\[ \tau = r F \sin \theta \]

\[ \omega = \alpha t + \omega_0 \]

\[ \omega^2 = \omega_0^2 + 2\alpha(\theta - \theta_0) \]
1. A long-playing record spins at a frequency of 33 1/3 rpm. How many revolutions does it turn in 1 second?

   A) 0.56
   B) 1.8
   C) 3.5
   D) none of the above

2. A 150-kg crate rests 0.5 m from the right end of a table which is 1.5 m long. How much force do the legs on the right-hand side exert?

   A) 0 N
   B) 330 N
   C) 650 N
   D) 980 N

Some useful equations:

\[ \omega = 2 \pi f \]
\[ \tau = r F \sin \theta \]
\[ \theta = \frac{1}{2} \alpha t^2 + \omega_0 t + \theta_0 \]
\[ \omega = \alpha t + \omega_0 \]
\[ \omega^2 = \omega_0^2 + 2\alpha(\theta - \theta_0) \]